

What is claimed is:

1. A multilayer barrier film structure, comprising:
a supporting substrate;
a multilayered body formed on a surface of the supporting substrate and including

an intermediate film for which the number of molecules of oxygen, water and the like permeating through is reduced upon heating or irradiation and

inorganic films formed so as to sandwich said intermediate film; and

a sealing region in which said intermediate film has been transformed by heating or irradiation provided so as to surround said multilayered body on the surface of said supporting substrate.

2. The multilayer barrier film structure according to claim 1, wherein said inorganic films are made of silicon oxide/nitride or silicon nitride.

3. The multilayer barrier film structure according to claim 1, wherein said intermediate film is made of a thermosetting resin, a polysilazane, or a metal oxide film obtained using a sol-gel method.

4. The multilayer barrier film structure according to claim 1, wherein said supporting substrate is made of a resin.

5. An organic electroluminescent display panel comprising:

at least one organic electroluminescent device each comprising first and second display electrodes and an organic functional layer that includes a light-emitting layer made of an organic compound and is formed so as to be sandwiched between said first and second display electrodes;

a supporting substrate supporting said organic electroluminescent device;

a multilayered body including

an intermediate film for which the number of molecules of oxygen, water and the like permeating through is reduced upon heating or irradiation and

inorganic films formed so as to sandwich said intermediate film, wherein the multilayered body is disposed at least between said organic electroluminescent device and said supporting substrate and on said supporting substrate surrounding said organic electroluminescent device such that one of said inorganic films contacts said organic electroluminescent device; and

a sealing region where said intermediate film has been transformed by heating or irradiation provided so as to surround said organic electroluminescent device.

6. The organic electroluminescent display panel according to claim 5, wherein a multilayered body comprising an intermediate film for which the number of molecules of oxygen, water and the

like permeating through is reduced upon heating or irradiation and inorganic films formed so as to sandwich said intermediate film covers, from a rear surface, said supporting substrate surrounding said organic electroluminescent device and the whole of said organic electroluminescent device so as to contact said organic electroluminescent device , and said organic electroluminescent device further comprises a second sealing region where said intermediate film has been transformed by heating or irradiation provided so as to surround said organic electroluminescent device.

7. The organic electroluminescent display panel according to claim 5, wherein a multilayered body comprising an intermediate film for which the number of molecules of oxygen, water and the like permeating through is reduced upon heating or irradiation and inorganic films formed so as to sandwich said intermediate film covers a surface of said supporting substrate on the opposite side to the surface contacting said organic electroluminescent device, and said organic electroluminescent device further comprises a third sealing region where said intermediate film has been transformed by heating or irradiation provided so as to surround said organic electroluminescent device.

8. The organic electroluminescent display panel according to claim 5, wherein said inorganic films are made of silicon oxide/nitride or silicon nitride.

9. The organic electroluminescent display panel according to claim 5, wherein said intermediate film is made of a thermosetting resin, a polysilazane, or a metal oxide film obtained using a sol-gel method.

10. The organic electroluminescent display panel according to claim 5, wherein said supporting substrate is made of a resin.

11. A method for manufacturing an organic electroluminescent display panel including an organic electroluminescent device and a supporting substrate supporting said organic electroluminescent device, the method comprising:

a first inorganic step of forming a first inorganic film so as to cover a surface of a supporting substrate;

a coating step of forming, on said first inorganic film, an intermediate film for which the number of molecules of oxygen, water and the like permeating through is reduced upon heating or irradiation;

a second inorganic step of forming a second inorganic film on said intermediate film;

a step of forming, on said second inorganic film, an organic electroluminescent device comprising first and second display electrodes and at least one organic functional layer comprising an organic compound formed so as to be sandwiched between said first and second display electrodes; and

a step of heating or irradiating a perimeter outside said organic electroluminescent device, to form a sealing region where

said intermediate film has been transformed surrounding said organic electroluminescent device.

12. The method according to claim 11, wherein the step of forming said sealing region is carried out through laser irradiation as said heating or irradiating.

13. The method according to claim 11, wherein said supporting substrate is cut through said laser irradiation.

14. The method according to claim 11, wherein said first inorganic film and said second inorganic film are made of silicon oxide/nitride.

15. The method according to claim 14, wherein said first inorganic film and said second inorganic film are formed through sputtering.

16. The method according to claim 14, wherein said intermediate film is formed using a wet film formation method.

17. The method according to claim 16, wherein said intermediate film is made of a thermosetting resin, a polysilazane, or a metal oxide film obtained using a sol-gel method.

18. The method according to claim 17, wherein said intermediate film is formed by drying a polysilazane solution.

19. The method according to claim 17, wherein said intermediate film is formed by polymerizing an epoxy resin.

20. The method according to claim 17, wherein said intermediate film is formed through a sol-gel method in which a metal oxide film is subjected to heating treatment.